

Applicants : Kenneth Schofield et al.
For : VEHICLE HEADLIGHT CONTROL USING IMAGING SENSOR
Page : 8

84. The headlamp control system of claim 72, wherein said control is operable to identify a traffic sign in response to light sensed.

85. The headlamp control system of claim 72, wherein said control is operable to identify a lane marker in response to light sensed.

86. The headlamp control system of claim 72, wherein said control is operable to identify a traffic light in response to light sensed.

REMARKS

Claims 1-53 as originally filed have been canceled herein and new claims 54-86 have been added. Examination on the basis of claims 54-86 is respectfully requested.

Applicants submit herewith eleven (11) sheets of formal drawings for entry in the present application. Entry and approval of the attached formal drawings is respectfully requested.

Applicants have amended the Specification as set forth above to update one of the cited applications, since it has now issued as U.S. patents, and to correct a typographical error.

The specification amendments and the new claims 54-86 are fully supported by the application as originally filed. No new matter is added.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Applicants : Kenneth Schofield et al.
For : VEHICLE HEADLIGHT CONTROL USING IMAGING SENSOR
Page : 9

Accordingly, examination on the basis of claims 54-86 and a Notice of Allowance is respectfully requested.

Respectfully submitted,

KENNETH SCHOFIELD ET AL.

By: Van Dyke, Gardner, Linn & Burkhart, LLP

ORIGINAL SIGNED BY
FREDERICK S BURKHART

Date: November 16, 2001

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Kenneth (NMI) Schofield, Mark L. Larson and Keith J. Vadas

For : VEHICLE HEADLIGHT CONTROL USING IMAGING SENSOR

Box Patent Application
Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

After the title and before the first line of the specification, the paragraph following the title has been amended as follows:

-- CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. pat. application, Ser. No. 09/599,979, filed June 22, 2000 by Kenneth (NMI) Schofield, Mark L. Larson and Keith J. Vadas, which is a continuation of U.S. pat. application Ser. No. 09/135,565, filed on Aug. 17, 1998, by Kenneth (NMI) Schofield, Mark L. Larson and Keith J. Vadas, now U.S. Pat. No. 6,097,023, which is a continuation of U.S. pat. application, Ser. No. 08/621,863, filed on Mar. 25, 1996 by Kenneth Schofield, Mark L. Larson and Keith J. Vadas, now U.S. Pat. No. 5,796,094, which is a continuation-in-part of co-pending U.S. pat. application, Serial Ser. No. 08/023,918 filed February 26, 1993, by Kenneth Schofield and Mark L. Larson. --

The paragraph beginning on page 5, line 12, has been amended as follows:

Imaging sensor module 14 includes an optical device 36, such as a lens, an array 38 of photon-accumulating light sensors, and a spectral separation device for separating light from the scene forward of vehicle 10 into a plurality of spectral bands, such as a filter array 40 disposed between optical device 36 and light-sensing array 38. Light-sensing array 38 is described in detail in co-pending application Serial No. 08/023,918 filed February 26, 1993,

Applicants : Kenneth Schofield et al.
For : VEHICLE HEADLIGHT CONTROL USING IMAGING SENSOR
Page : 2

by Kenneth Schofield and Mark Larson for an AUTOMATIC REARVIEW MIRROR SYSTEM USING A PHOTSENSOR ARRAY, now U.S. Pat. No. 5,550,677, the disclosure of which is hereby incorporated herein by reference. Light-sensing array 36 includes a plurality of photosensor elements 42 arranged in a matrix of columns and rows (Fig. 4). In the illustrated embodiment, an array of 512 rows and 512 columns of light-sensing pixels, each made up of a photosensor element 42 is utilized. However, a greater or lesser number of photosensor elements may be utilized and may be arranged in matrix that is laid out in other than columns and rows. Each photosensor element 42 is connected to a common word-line 44. To access the photosensor array, a vertical shift register 46 generates word-line signals to each word-line 44 to enable each row of photosensor elements 42. Each column of photosensor elements is also connected to a bit-line 48 which is connected to an amplifier 50. As each word-line 44 is accessed, a horizontal shift register 52 uses a line 54 to output the bit-line signals on consecutive bit lines 48 to an output line 56. In this manner, each photosensor element 42 may be individually accessed by appropriate manipulation of shift registers 46 and 52. Output 56 is supplied to a digital signal processor 13 which is supplied on an output 62 as input to control circuit 13 (Figs. 3-5).

The paragraph beginning on page 9, line 8, has been amended as follows:

In a similar fashion, processing of a headlight frame begins at ~~110~~ 109 by setting the exposure period for the imaging sensor module to grab the next frame as a red taillight detecting frame. This is accomplished by setting the exposure period of the imaging sensor module to 0.004 seconds. It is then determined at 120 for each pixel whether an adjacent set of "red," "green," and "blue" pixels each exceeds a particular threshold and whether the pixel intensity levels all fall within a particular range, such as within 20 percent of each other. If all of the red, green, and blue pixels exceed a threshold and pass the ratio test, then it is determined that a white light source is being sensed and a "white" counter is incremented at 122. After all of the pixels in the frame have been processed, the process.tails flag is set to a "yes" state at 124. Control then passes to 118.